

# TURN CHANGE CHANCE





# POWER TO TURN CHANGE INTO CHANCE

Futaba started out as a vacuum tube manufacturer, and our history has been one of continual change.

Even when one technology is supplanted by another, accumulated know-how can be applied to new technology to progress further still.

Based on this conviction, in recent years we have expanded our areas of business into not only Organic Light-Emitting Diode (OLED) displays and touch sensors, but also robots, drones, and Al/IoT technology.

In doing so, we value pursuing the nature of things in a stubbornly honest manner. No matter how much technology evolves, by looking into the true nature of people and technology, we can see what society and our world truly need.

Now and in the future, Futaba will continue to take on new challenges daily as we strive to turn change into chance.



Futaba Philosophy

### Honshitsu-no-Chokushi

Corporate Philosophy

We, Futaba Group, contribute to the prosperity of the global society by creating equipment, materials and services, which are indispensable to our customers.

Corporate Vision

By further advancing Futaba technology, we aim to become a leading company worldwide.

Code of Conduct

We will pursue the nature of things in a stubbornly honest manner, and practice the following to establish a corporate culture which allows us to make a free and imaginative way of thinking while sharing joy with all of our customers and employees:

- 1. Challenge every business opportunity with speed and eagerness.
- 2. Endeavor to enhance one's capabilities in order to make one's dream come true.
- 3. Conduct one's life with warm cordiality, and value people-to-people relationships.
- 4. Conduct one's life in a law-abiding manner and with ethical sense.
- 5. Promote love for nature and protect the future of our planet through reducing environmental load.









### **Futaba's Areas of Business**

# With our areas of business of Electronic Devices and Machinery & Tooling, we create new value suitable to an era of continual change.

### Message from the President

Futaba Corporation was founded in 1948, just after World War II, to manufacture and sell vacuum tubes. Since our founding, we have supplied basic components that underpin a variety of fields with trustworthy technology and quality. This is in line with our corporate philosophy of "Honshitsu-no-Chokushi" (to look deeply into the nature of things and investigate it thoroughly). Thus, through our business, we have contributed to the expansion of industry.

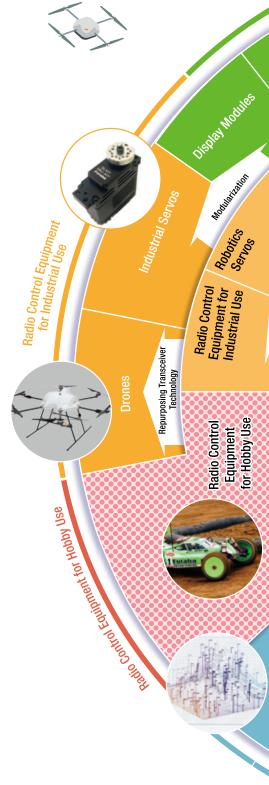
As technology has evolved, we have expanded our product lineup to meet the advanced requirements of a wide range of fields. It now includes: OLED displays, touch sensors, radio control equipment for industrial and hobby use applying wireless technology, components for dies and molds such as mold bases, plate products and equipment for streamlining molding and manufacturing work.

Hereafter we will expand our areas of business through "manufacturing-based solutions" as a manufacturer who quickly creates competitive products by combining software and services around the core hardware we have developed and who possesses the reliable technology to produce high-quality products.

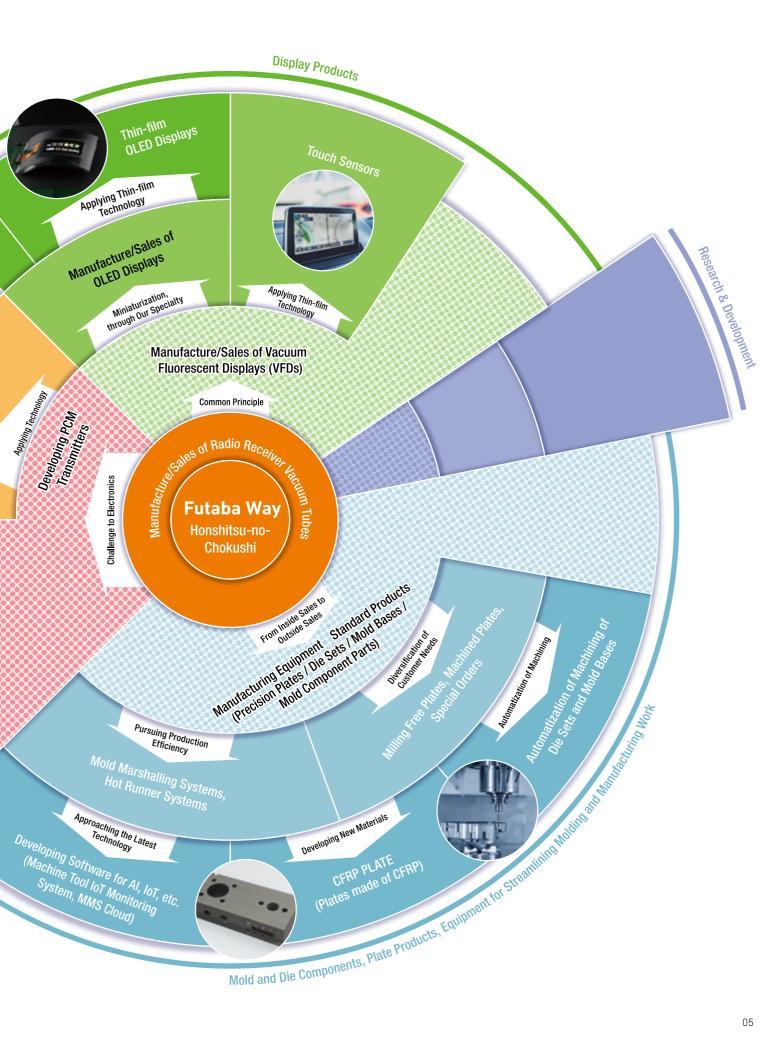
As our company orients toward the next stage of development, we will push forward with "creating equipment, materials and services which are indispensable" as we to share our joy and passion with all stakeholders. We would appreciate your continued support.

Representative Director and President



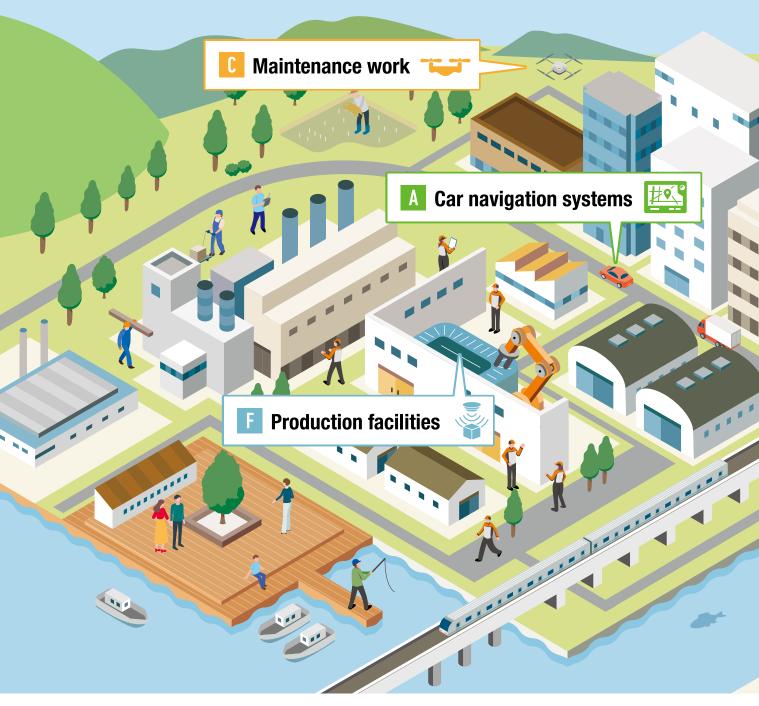






### Our Unparalleled and Indispensable.

# **Futaba Technology Supports Society Behind**







The **touch sensors** in car navigation systems use Futaba's thin-film technology.

B In laptop computers



Keyboards incorporating **OLED displays** can show information about settings such as function keys.

# C In maintenance work

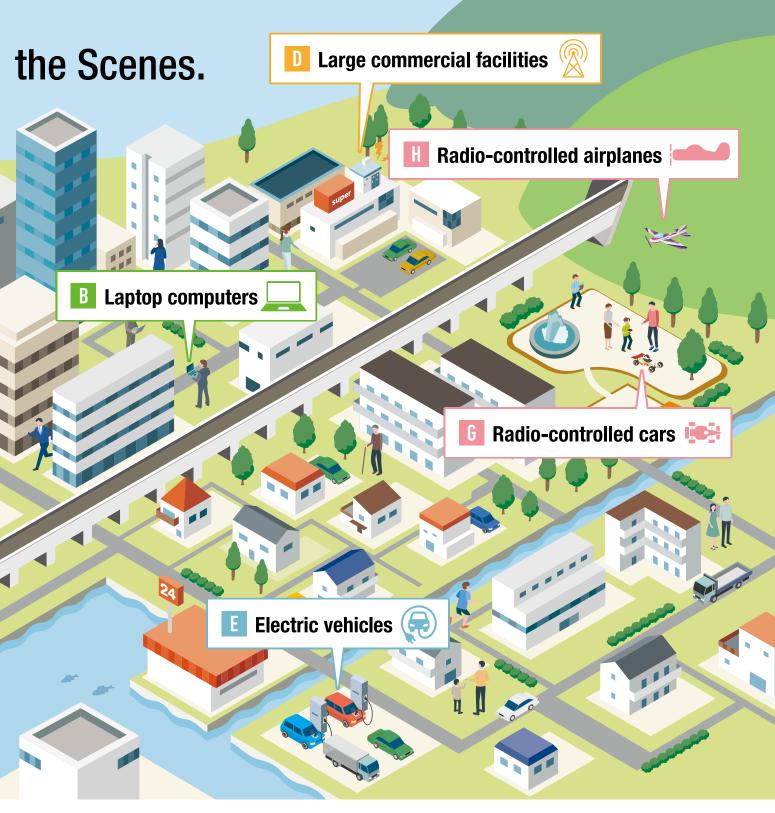


**Drones** can perform work in even high places such as inspecting steel towers, bridges, and other facilities, safely and efficiently.

In large commercial



Wireless units can be installed in rooftop cubicles to transmit information such as power consumption to offices and other locations over the air. This eliminates the need to lay wiring.







Futaba's **mold and die components** are instrumental in the production process of cutting-edge products such as smartphones and electric vehicles.

F In production facilities



Futaba's **mold marshalling systems** are used in factories manufacturing plastic components to screen out defective items.

**G** In radio-controlled cars



Futaba's products are used in both the **transmitters and servos** of commercial radio-controlled cars.

In radio-controlled airplanes



Futaba's transmitters for **radio-controlled planes and aircraft** are beloved by fans around the world.



Combining experience and knowledge accumulated over years with new ideas and technology, we have developed touch sensors and OLED displays that meet a variety of needs. Their reputation for reliability has led to their use in a wide range of products such as cars, home electronics, audio equipment, and POS terminals.

### Touch Sensors

These sensor devices employ Futaba's original thin-film technology to achieve high sensitivity and excellent environmental resistance. A thin, lightweight substrate with a single glass structure and a dedicated controller gives users smartphone-like operation.



### Display Modules

Our highly versatile display modules are made by combining a display device such as a TFT-LCD and a control board. They support a wide range of interfaces.



### **■** Organic Light-Emitting Diode (OLED) Displays

These next-generation devices feature beautiful high-contrast, high-definition screens. Because they meet the strict quality standards for on-board equipment, they are used in applications such as vehicle instrument panels. For wearable devices, film type curved OLEDs are also available.







Our radio control technology, employed to freely operate RC vehicles and drones, is now being used for industrial applications. It enables precise control of equipment in severe environments and has been growing as part of Futaba's technological solutions indispensable for society, alongside robotics and various modules.

### Industrial Drones

Our drones achieve stable flight even in environments with strong winds and rain. They can be used for various applications including inspection, security, and disaster response.



# Radio Control Equipment for Industrial Use

Products including wireless remote controllers for truck cranes, crop dusting helicopters, heavy construction equipment, wireless modules that support a wide range of frequency bands, and long-range wireless modems, respond to industry needs for high reliability and stability.





### **Industrial Servos**

We boast a rich lineup of highly durable and environmentally resistant actuators that employ servo technology developed for robots and radio control equipment.





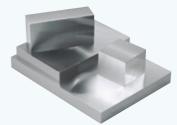


We not only provide mold and die components, but also support the streamlining of the molding process as a manufacturing partner. Our leading technology, such as mold marshalling systems, responds to the needs of production sites to improve processes and increase quality.

### Mold and Die Components

Basic components like plate products, mold bases, and die sets, flexibly support custom machining that meets the need for "various machining" and "high component precision."







### Hot Runner Systems

By heating resin channels within the molds, we can maintain resin flow conditions and eliminate sprues and runners. This furthers goals such as reducing material costs and shortening mold cycles.



### **■ IoT Products**

We provide an IoT monitoring system that achieves production process control through remote surveillance.



### **■ Mold Marshalling Systems**

Installing a sensor and dedicated amplifier inside the mold allows the behavior of the resin in the mold to be converted to a signal that can be output as a wave form to a computer in real-time. This quantified data can be used in various applications such as configuring optimal molding conditions, automatically detecting defective products, and quality management.





These include high performance transceivers and servos featuring bidirectional communication. The high level of performance of our products has been proven in competitions and races around the globe. We provide products that bring the joy of flying and driving radio-controlled vehicles to novices and experts alike.

### For Cars

We boast a full lineup of proportional control sets, ranging from entry-level to high-end models that are tailored to meet users' needs. These feature components such as servos that can be adjusted to users' preferred feel, high-performance gyroscopes crucial to drifting, and electronic speed control to bring out the motor's full potential.



### For Aircraft

Our proportional control sets, receivers, servos, gyros, motors, electronic speed controls, and more, support a broad range of models in every genre of the RC aircraft field, from small to large airplanes to helicopters.







### **Creating New Value Through Innovation**

# **Research and Development**

We have established a Core Technology Development Center to aim for sustainable growth and improved corporate value by creating new businesses and accelerating their commercialization. As we work to accumulate intellectual property, we are also actively engaged in cross-domain collaborative research.







### **Core Technology Development Center**

Here we develop the underlying technology and advanced technology for next-generation products. Our daily research aims to create technology beneficial to the future of the world. To this end we furnish an environment and facilities that allow our engineers to fully realize their potential.

### Research and Development Policy

With future-focused research and development, we are achieving sustainable business development and creating new value for society.

### **■ Futaba Technology**

Our core technologies include: material technology (light-emitting materials, material design), design technology (optics, thin-film, thick-film, electrostatic, controls, circuits), evaluation technology and simulation technology. We will use open innovation to integrate Futaba's unique technologies with new outside technologies. This will allow us to create products with more competitive edge.



Clean room worl



# Future Society

### Futaba from here on out

Society is seeking rapid digital transformation on a global scale. Futaba will powerfully back this effort with our latest technologies, including data utilization through IoT, use of drones, automation via robots, and on-demand orders.

# Electronic Device-related Fields

Expanding the applications for technology and products, and creating new technologies

# Components

**OLED** (Special applications / High luminance)

Under special applications, we are pursuing the possibilities of technology to produce commercial print heads with our OLED light source that simultaneously achieve not only high-definition and high speed, but also high durability and long-life. Under display applications, we are promoting the development and promulgation of thinner, lighter displays, and advancing high luminance for in-vehicle applications.



### **Solutions**

### **Drone Systems**

We are developing industrial drones that meet the demands of industrial applications such as long flight times by utilizing wired power supply, and high wind resistance performance. We aim to capitalize on these characteristics by deploying them for applications in infrastructure maintenance and disaster response.



### **Industrial Servos**

Based on technologies cultivated through hobby radio control and robotics, we are developing industrial servos with enhanced output, durability, and hostile-environment resistance. They can be used in a great variety of settings, including the moving parts of drones and automatic carrier vehicles, robots, industrial equipment, and production facilities.





Looking toward the future by helping to create sustainable society.

Expanding areas of business to software and services around our core hardware

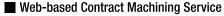
### **IoT Monitoring System**

We have developed a cloud service named "Machine Tool IoT Monitoring System" that streamlines work on-site by visualizing the operational status of machine tools using our radio communication technology. This solves a key issue facing the manufacturing industry: insufficient man hours to improve processes due to a shortage of engineers.



### **Web-based Contract Machining Service**

We have launched a web-based contract machining service that utilizes machine learning. Our worldwide factory network allows products to be manufactured at the optimal factory according to QCD (Quality, Cost, and Delivery). We support the latest industrial 3D printers that have yet to be imported to Japan, and can take orders for even single prototypes.









Realize a Sustainable Society Through Implementing SDGs.

# Efforts to Achieve **SDGs**





### **Environmental Management**

We are discussing and implementing concrete measures to take action to combat climate change and its impacts.

### Promote Environmental Education

We formulate an annual plan and hold environmental training. We are striving to increase the environmental awareness of our employees.

### ✓ Implement Environmental Management Review

At two environmental meetings per year, we check progress toward achieving our goals, and hold deliberations for

### Conduct Environmental Audits

We conduct internal environmental audits (once per year), external environmental audits by an outside examining

\*Conducted in offices and affiliates that have acquired ISO14001 certification.



We conduct training simulations to ensure the safety of human life, reduce damage and minimize environmental impacts.



Response training for discharge of chemical



### **Environmentally Friendly Product Initiatives**

We are working to develop and provide products that take environmental impacts into consideration throughout their entire life cycle.

### Developed CFRP Plate for Machining Named "Felcarbo".

We have developed CFRP (Carbon Fiber Reinforced Plastic) that uses carbon fiber felt. It possesses characteristics such as light weight, strength, and freedom from rust. So, we anticipate that it can be used to replace metal components, making high-speed moving parts lighter and improving transportability. This will help to improve productivity by reducing the burden on workers and machinery.

Changing servo press center plate from metal to CFRP



- Power consumption: Reduced by 30%
- Effective CO2 reduction: Approx. 196 kg/year\*
- Servo motor power consumption of 750 W. in operation 8 hours/day, 220 days/year.







### Efforts Toward a Low-carbon Society

We use energy resources efficiently and work to reduce the burden of our business activities on the environment,

### Efforts to Reduce Greenhouse Gas Emissions

We are working to reduce the CO<sub>2</sub> emissions of our entire group by 46% or more by 2030 compared to FY2013. (Emissions had been reduced by 8.5% in FY2019 compared to FY2013)

### Efforts to Conserve Energy

We are promoting energy conservation activities such as  $upgrading^*$  to LED lighting and high efficiency equipment. \*We upgraded 151 mercury lamps in our factory to LEDs, reducing power consumption by 58,082 kw/h annually.

### Promote Adoption of Renewable Energy

We make space on the company grounds available to solar power generation companies. This allows us to contribute to greenhouse gas reduction.





### Efforts to Recycle

We engage in recycling and resource conservation in order to efficiently utilize finite resources

### **▼** Improve Recycling Rate

We aim to achieve zero emissions and a recycling rate of 99% or more. (FY2019: 99.9% recycling rate at domestic locations, 94.1% recycling rate for entire group)

# ▼ Thorough Decomposition/Separation to Reduce Waste Disposal Costs

We are working to utilize resources and reduce use of natural resources through appropriate separation. This includes sorting plastics into five categories, and metals into eight categories. Detailed separation increases the ratio of valuable materials recovered and leads to reduced waste disposal costs.

### Ratio of valuable materials recovered to waste disposal costs in FY2019





64 million Jl
Value of valuable
materials recovered:
182 million JPY

Sorted valuable materials (one portion





### **Efforts to Promote Biological Diversity**

We aim to conduct our activities in harmony with the natural environment, taking account of natural ecosystems.

### **Wetland Conservation Activities**

The wetlands near our Chosei factory were once said to be one of the richest repositories of plant life in Japan. We now maintain a balancing pond on the grounds to prevent them from drying out. We cut weeds, plow soil, and improve water quality in the balancing pond, with the goal of maintaining and increasing the population of endangered native plant species.

### Growth Condition Following Conservation Activities

The population of endangered species is increasing year by year. Scleria mikawana Makino, Eriocaulon decemflorum Maxim, Eriocaulon parvum Koern, and Centranthera cochinchinensis, have each expanded their range and are growing together in mass. In particular, Scleria mikawana Makino has expanded its range over the entire wetland.







### **Efforts Concerning Personnel**

We aim to create an environment in which diverse personnel can continue to work while achieving job satisfaction.

### **✓** Efforts Concerning Work Style

We have expanded various systems to support both working and childbirth/childrearing by employees. We have a 100% return rate after childcare leave, and maintain a support system that can handle things such as work location restrictions if it is difficult to use childcare leave.

### Promoting Diversity

Since 2018, we have carried out training for managerial personnel in order to construct a work environment in which female employees can flourish (A total of 66 employees have participated). In addition, we conducted "career education and training" for female employees (A total of 23 employees have participated in FY2019). In recent years, the number of women in research and sales positions has been increasing.



Career education and training





### **Social Contribution Activities**

As a member of the community, we contribute to local development.

### ▼ Training Operators at Futaba's Drone School

To promote sound growth of the unmanned aerial vehicle industry, our company instructors hold regular drone schools using our indoor and outdoor airfields. Trainees come from all over Japan.

### **✓** Local Fire-fighting Activities

We have organized a special fire brigade, not only to conduct fire-fighting activities within the company, but to dispatch to fires in the neighborhood. Sharing the burden of fire-fighting activities is a part of our contribution to our local community.



Drone practical training

### **FUTABA CORPORATION**

https://www.futaba.co.jp/en/





Futaba Technology for the world. Futaba Group will support our customers globally.





### Headquarters

### [Research and Development]

NETWORK

Core Technology Development Center

### [Design/Development/Manufacturing/ Sales and Services]

- Electronic Components Business Center
- System Solution Business Center
- Hobby Radio Control Business Center
- Radio Control Equipment Customer Service
- Machinery & Tooling Business Center
- Chonan Machinery & Tooling Factory

### [Sales and Services]

- Sendai Satellite Office
- ■Tokyo Sales Office
- ■Tokyo Sales & Marketing Office
- Okaya Satellite Office
- Hamamatsu Satellite Office
- Nagoya Sales Office
- Kansai Sales Office
- Osaka Sales Office
- Kansai Satellite Office
- Hiroshima Satellite Office Kyushu Satellite Office

### [Domestic Affiliates]

- FUTABA PRECISION Co., Ltd.
- FUTABA MOBILE DISPLAY Corporation
- SATSUKI KIZAI Co., Ltd.
- Kabuku nc.
- SENTORARU DENSHISEIGYO CO., KTD.
- 0.S. ENGINES MFG. Co., Ltd.
- FUTABA BUSINESS SYSTEM Co., Ltd.





### **FUTABA Corporation of America**

- Chicago Office
- Detroit Office
- Huntsville Office
- FUTABA (Europe) GmbH
- FUTABA CORPORATION Germany Representative office
- FUTABA PRECISION MOULD (Shenzhen) Corporation, Ltd.
- FUTABA Corporation of Huizhou
- FUTABA ELECTRONICS (Beijing) Co., Ltd.
- FUTABA PRECISION DIE AND MOLD MACHINERY (China) Co., Ltd.
- FUTABA INTERNATIONAL TRADING (Shanghai) Co., Ltd.
- FUTABA (Hong Kong) Corporation,Ltd.

- TAIWAN FUTABA ELECTRONICS Corporation
- FUTABA ELECTRONICS COMPONENTS KOREA Co., Ltd.
- KISHIN Corporation
- KISHIN MEGATEC Co., Ltd.
- WONJIN PRECISION Co., Ltd.
- FUTABA DENSHI Corporation (S) Pte. Ltd.
- FUTABA JTW (thailand) Ltd.
- FUTABA (Vietnam) Co., Ltd.
- KISHIN VIETNAM Co., Ltd.





# **COMPANY PROFILE**

Name	FUTABA CORPORATION	
Address	629 Oshiba, Mobara, Chiba Prefecture	
Phone	81-475-24-1111 (main number)	
Established	February 3, 1948	
Capital	22,558 million JPY	
Stock Exchange	Tokyo Stock Exchange, Prime Market	
Business Details	Design, development, manufacture and sales of electronic components, radio control equipment, manufacturing equipment Typical products: Electronic Modules, Radio Control Equipment for Industrial Use, Radio Control Equipment for Hobby Use,Touch Sensors, OLED Displays, Plate Products, Mold and Die Components, Equipment for Streamlining Molding and Manufacturing Work, etc.	
Sales	[Consolidated] 60,326 million (March 2023)	
Employees	[Consolidated] 3,823 [Unconsolidated] 854 (as of March 31,2023)	

Directors			
Representative Director and President	Motoaki Arima		
Director	Toshihide Kimizuka		
Director	Masaharu Tomita		
Director	Takemitsu Kunio*		
Director	Masako Tanaka*		
Director (Full-time Audit and Supervisory Committee Member)	Tadashi Ohmura*		
Director (Full-time Audit and Supervisory Committee Member)	Tatsuya Ikeda		
Director (Audit and Supervisory Committee Member)	Akihiro Ishihara*		
	*Outside Director (as of June 29,2023)		

# NFORMATION



### **FUTABA CORPORATION Website**

https://www.futaba.co.jp/en/

Product Information, etc.





### Facebook

https://www.facebook.com/FutabaRC/

### Twitter

https://twitter.com/FutabaRC\_JP

Announcements about new products and product updates

Notifications about events and tournaments Information on the activities of our employees, supported driver/flyer, etc.











### Youtube

https://www.youtube.com/user/ FUTABA6986/videos

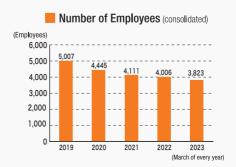
Explanation of consolidated financial statements, product descriptions, and introducing the natural environment around our Chosei factory.

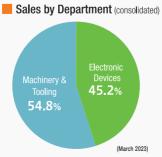




# DATA









### Futaba's Path of Continuing to Evolve by Turning Change into Chance

### 1948

Established Futaba Corporation to manufacture and sell radio receiver vacuum tubes (Mobara-cho, Chosei-gun)
Opened Tokyo Branch. Began sales of vacuum tubes
(Hanada-cho, Kanda)



The very first Futaba factory

### 1961

Opened Mansei Sales Office. Began sales of communications devices, radio control equipment, and plastic models

### 1962

Began manufacture/sales of radio-controlled transmitters and receivers for hobby use

### 1963

Acquired Unique Precision Co., Ltd. Created Machinery and Tooling Division. Began manufacture/sales of components for press dies

### 1965

Began manufacture/sales of energy efficient equipment



Catalog cover of 'Unique Die Set'

### 1967

Began manufacture/sales of components for plastic molds

### 1968

Began manufacture/sales of gas-discharge display tubes, first entry into the display device industry

### 1969

Began manufacture/sales of mold plates

### 1980

Opened Chonan Machinery & Tooling Factory in Chonan-machi, Chosei-gun, Chiba Prefecture and relocated components for molds operations

### 1985

Began listing company shares on the Second Section of the Tokyo Stock Exchange Opened Akashi Machinery & Tooling Factory in Akashi, Hyogo Prefecture



Ceremony to celebrate

### 1986

Company shares promoted to the First Section of the Tokyo Stock Exchange

### 198

Integrated standardized plate products into precision plates

### 1988

Established KISHIN Corp. (Korea) (Manufacture/sales of components for dies and molds)

1980s



1970s

### 1960s

### 1970

Began manufacture/sales of cylindrical multi-digit VFDs Began sales of mold bases assembly after standardization



Components for molds

### 1972

Established TAIWAN FUTABA ELECTRONICS Corp. (Manufacture of VFDs)

### 1973

Relocated headquarters to current location at 629 Oshiba, Mobara, Chiba Prefecture Established FUTABA Industries U.S.A. (Renamed Futaba Corp. of America in 1978)

### 1975

Established FUTABA (Hong Kong) Corp., Ltd. as a sales base for Southeast Asia

### 979

Established FUTABA (Europe) GmbH. (Germany) as a sales base for Europe



### 2001

MMS was awarded the 43rd Ten Best New Products Prize, sponsored by The Nikkan Kogyo Shimbun, Ltd. Established FUTABA INTERNATIONAL TRADING (Shanghai) Co., Ltd. (P.R.C.) (Sales of electronic components) Established FUTABA (Vietnam) Co., Ltd. (Vietnam) (Manufacture of parts for molds)

### 2002

Completed Merger. Established FUTABA ELECTRONICS (Beijing) Co., Ltd. (P.R.C.) (Sales of radio control equipment)

### 2003

Established FUTABA Corporation of Huizhou (P.R.C.) (Manufacture/sales of electronic components)

### 2005

Established FUTABA PRECISION DIE AND MOLD MACHINERY (China) Co., Ltd. (P.R.C.) (Manufacture/sales of components for dies and molds)

### 2006

Established FUTABA PRECISION Co., Ltd. in Kamaishi, Iwate Prefecture (Manufacture of components for molds)

### 2008

Added SATSUKI SEISAKUSHO Co., Ltd. and SATSUKI KIZAI Co., Ltd. as subsidiaries (Renamed SATSUKI KIZAI Co., Ltd. after SATSUKI SEISAKUSHO Co., Ltd. acquired SATSUKI KIZAI Co., Ltd. in 2009) to enhance components for dies

### 2009

Established FUTABA ELECTRONICS COMPONENTS KOREA Co., Ltd. (Sales of electronic components) Acquired shares of TDK Micro Device Corp., first entry into OLED display business



Film OLED display



2020s

2010s

2000s

### 1990s

### 990

Established FUTABA BUSINESS SYSTEM Co., Ltd.

### 1991

Established FUTABA DENSHI Corp. (S) Pte. Ltd. (Singapore) (Sales of electronic components)

### 1993

Added O.S. ENGINES MFG. Co., Ltd. as a subsidiary to achieve diversification in the market of radio control equipment for hobby use.

### 1994

Established FUTABA PRECISION MOULD (Shenzhen) Corp. (P.R.C.) (Manufacture of components for molds)

### 1995

Established FUTABA Corp. of the Philippines (Manufacture of VFDs)

### 1996

Established FUTABA JTW (Thailand) Ltd. (Manufacture/sales of components for dies and molds)

### 1999

Began sales of the Mold Marshalling Systems (MMS)



(Left) Engine for models by 0.S. ENGINES (Right) Transceiver by Futaba

### 2010

Acquired all shares of FUTABA ELECTRONICS (Beijing) Co., Ltd.

## 2011

Began manufacture/sales of touch panels



Touch Sensors

### 2012

Acquired all shares of TDK Micro Device Corp.
Renamed FUTABA MOBILE DISPLAY Corp. to accelerate
OLED display business

### 2014

The In-Cavity Melt Flow Speed Measurement System was awarded the 56th Ten Best New Products Prize (The Nikkan Kogyo Shimbun, Ltd.)

### 2016

The Film OLED Display was awarded the 58th Ten Best New Products Monozukuri Prize (The Nikkan Kogyo Shimbun, Ltd.) Opened Futaba's Drone School at our Chosei factory

### 2017

Added Kabuku Inc. as a subsidiary Established Tokyo Sales & Marketing Office (Sales of electronic devices)



### 2018

Celebrated 70th anniversary Added SENTORARU DENSHI SEIGYO CO., LTD. to the corporate group



MMS